Table 1
Response to EPA Comments on the Draft Screening Level Ecological Risk Assessment (SLERA) Report Dated June 6, 2014
Comments Dated October 14, 2016
Brine Service Company Superfund Site (TX0000605264)
Corpus Christ, Nueces County, Texas

No.	Comment No.	Section	Comment	Response / Notes
1	1.	General Conditions (SLERA)	To eliminate concerns over future use, please provide stronger documentation that the site will remain limited to commercial industrial use. Please document deed restrictions, zoning restrictions, property ownership, future plans, and any other information that strengthens the argument that the site will remain limited to commercial and industrial use.	A discussion of current and future land use will be added to Section 2 (Screening-Level Problem Formulation/Ecological Effects Evaluation (Step 1)).
2	2.	General Conditions (SLERA)	Please provide more detailed justification with figures to show that the source of metals and polycyclic aromatic hydrocarbon (PAHs) in the north segment of the east ditch is offsite. This should include a figure showing all upstream concentrations and information on surface water flow.	Figures with the surface water and sediment data will be added to the report. The discussion of offsite sources of metals and PAHs in Section 7.3.3 (Evaluation of Risk for Constituents that Might Not be Site-Related) will be expanded to provide additional justification.
3	3.	General Conditions (SLERA)	If no observed adverse effects level (NOAEL) based hazard quotients (HQs) are greater than one but the lowest observed adverse effects level (LOAEL) based HQ is less than one the COPC cannot be eliminated for that receptor COPC pair. The starting point for developing a preliminary remedial goal (PRG) is the midpoint between these values. Please base the protective concentration for COPCs using the midpoint between the NOAEL-based HQs greater than one and the LOAEL-based HQ less than one. Please provide the midpoint between the two toxicity reference values (TRVs). Please add preliminary remedial goals (PRG) to the acronym and definition list.	Tables 40, 41 and 43 will incorporate an additional analysis using the mid-point TRV. PRG will be added to the acronym and definition list.
4	4.	General Conditions (SLERA)	Hazard indexes were not presented for measurement receptors. Please provide.	The calculation of hazard index for PAHs is not applicable because PAH concentrations are summed as Low Molecular Weight, High Molecular Weight and Total PAHs. Similarly for PCBs, total PCBs are evaluated. Total DDT hazard index (sum of HQs from DDT, DDD and DDE) will be provided, if applicable. The uncertainty for other hazard indexes is too great due to differences in the basis for the TRVs, test species and mode of action to justify the calculations.
5	5.	General Conditions (SLERA)	Risk to terrestrial plants, terrestrial invertebrates, and benthic invertebrates was not eliminated by food chain modeling in upper trophic receptors. The text appears to eliminate COPCs based on this analysis. Please discuss risk to these receptors in the summary and conclusions. Please also provide a discussion of the disturbed nature of the Site.	The conservative analysis (Section 6.5) and less conservative analysis (Section 6.6) include a discussion of the risks to terrestrial plants and invertebrates and benthic invertebrates separate from the discussion of upper trophic level receptors. A COPC for a community level receptor was not eliminated based on upper trophic level risk. A discussion of community level receptors will be added to the conclusion of the SLERA along with an expanded discussion on land use. Land use and the disturbed nature of the Site will be incorporated into Section 2 (See response to SLERA General Conditions 2).
6	6.	General Conditions (SLERA)	TRRP defines sediment as non-suspended particulate material lying below surface waters. Under TRRP-24 – Determining PCLs for Surface Water and Sediment; media should be evaluated as soil where a water body is dry most of the year. Please evaluate areas of the East Ditch that remain dry for most of the year as soil. If the habitat serves as both a terrestrial and an aquatic habitat, then the most conservative screening values should be utilized. If only soil values are going to be used, additional quantitative evidence to prove that the southern portion of the East Ditch is dry and never serves as an aquatic habitat will need to be presented. Field observations on the day of the site visit and subsequent intermittent observations during field activities are insufficient to classify the ditch as only terrestrial.	The portion of the East Ditch (North) of the "S-turn" is perennial so this data would not be evaluated as soil media. The maximum concentrations of samples collected from the intermittent portion of the East Ditch (south of the "S-turn") were compared sediment benchmarks in Table 8 and soil benchmarks in Table 10. The trophic analysis of the southern portion of the East Ditch as sediment will be added to SLERA.
7	1.	Section 2.1, Page 2-1	This section includes a description of the surrounding areas in each direction with the exception of northeast which is Tule Lake, the receiving body for the East Ditch and the North Ditch. Please include Tule Lake in the description of the environmental setting.	A description of the Northwest Ditch and Tule Lake will be added to the environmental setting section.
8	2.	Section 2.1.2, Page 2-3	This section describes, "The maintained grassy areas were dominated by non-native grasses including Bermudagrass (*Cynodon dactylon*), guineagrass (*Urochloa maxima*), and slimspike windmill grass (*Chloris andropogonoides*) as well as Kleburg bluestem (*Dichanthium annulatum*)." During Site visits for the ecological risk assessment, shortspike windmill grass as a dominant grass species in the grassy areas was not observed; however, slimspike windmill grass appeared prevalent. Please update	This section will be updated as requested.

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			accordingly. In addition, slimspike windmill grass is a native grass. Please revise so it is not included in the list of non-native species. Please correct the spelling for the name Kleburg bluestem to Kleberg bluestem. This section further describes, "Also within the grassy area were a few scattered shrubs/small trees including mimosa (*Albizia julibrissin*) and mesquite (*Prosopis glandulosa*)." According to the USDA Plant Database's county distribution map for *Albizia julibrissin*, this plant does not occur in Nueces County where the Site is located. The white leadtree (*Leucaena leucocephala*) was identified on Site. According to the USDA Plant Database's county distribution map, white leadtree is found in Nueces County. Please update all mimosa to white leadtree, as appropriate. Please update all "mesquite" to its proper name of "honey mesquite." Please update and correct throughout the document.	
9	3.	Section 2.1.3, page 2-3	Please update this section as described in specific condition #1 above. In the second paragraph, the East Ditch is described in this section as being concrete lined. Additionally, the paragraph describes numerous breaks in the concrete. Please provide a more complete description of the areas in the ditch that are partially lined and including the portions that are unlined. The first paragraph in this section describes, "Although narrow, the riparian corridor along the East Ditch contained shrubs and small trees including honey mesquite, white leadtree, and sugarberry (*Celtis iaevigata*) along its entire length." Update the name sugarberry to sugar hackberry. The second paragraph in this section describes, "Within the southern segment of East Ditch, upstream of the concrete-lined 'S' curve, the riparian corridor included green ash (*Fraxinus pennsylvanica*) and yaupon in addition to the species listed above." According to the USDA Plant Database's county distribution map for *Fraxinus pennsylvanica*, this plant does not occur in Nueces County where the site is located. However, the USDA Plant Database's county distribution map for Nueces County does show Mexican ash (*Fraxinus berlandieriana*), which is more likely what was growing in the riparian corridor. Please update accordingly. During Site visits for the ecological risk assessment, yaupons were not observed in the riparian corridor. Please double check this plant's identification and update accordingly. The third paragraph in this section describes, "The northern segment of the East Ditch contained water at the time of the site visit. In addition to the riparian species listed, retama (*Parkinsonia aculeate*), palmetto (*Sabel minor*), Johnson grass (*Sorghum halpense*), Kleberg bluestem, and guineagrass were also present in the riparian corridor." Please correct the spelling for the scientific name for retama from *Parkinsonia aculeate* to *Parkinsonia aculeata*, add dwarf to palmetto, correct the spelling for the scientific name for dwarf palmetto *Sabel minor* to *Sabal minor*, combine Johnson and grass to make one word, correct the spelling for the scientific name for Johnsongrass from *Sorghum halpense* to *Sorghum halepense*, and correct the spelling of the name Kleburg bluestem to Kleberg bluestem.	This section will be updated as requested.
10	4.	Section 2.5, Page 2-8, bullets 7 & 8 and Table 1	Incorporating background values into screening values is not appropriate. This implies that background values are acceptable when background may have risk from natural or anthropogenic sources. Compare to screening values then compare exceedances to background values. Please utilize a statistical comparison of background values to onsite values for EPA guidance on the use of background values. Please utilize a statistical comparison or to compare the 95 upper concentration limit (UCL) of background to the 95 UCL of site data.	Tables 1 to 13 of the SLERA will be reviewed and background concentrations will be separated from the risk-based from the screening values. A separate background discussion will be added to the text. Statistical comparisons will be provided as appropriate. A 95% UCL is not available for the background concentrations using the Texas-specific soil background concentration.
11	5.	Section 4.2.2, Page 4-3	Mercury was identified in the East Ditch at levels above background and above ecological risk screening levels. Please include mercury in Table 24.	Mercury is listed on Table 24. It is on the sixth row from the bottom of the table.
12	6.	Section 5.0 and	The final Scientific Management Decision Point (SMDP) will be done by the EPA risk assessor and the	The text will be clarified to indicate that these are the Group's recommendations.

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		Section 8.0	EPA RPM after reviewing the material submitted by the Group. Please indicate that these are recommendations by the Group and that the final SMDP that will be developed by the EPA.	
13	7.	Section 6.3.2, Page 6-7	From review of the various wildlife exposure assumptions listed in Table 32, the soil ingestion percentage for the American robin and the red-winged blackbird appear incorrect based on the reference cited. According to table note (d), the EPA's Ecological Soil Screening Guidance[1] was used as the information source, and the soil ingestion for the ground insectivore was assumed. The cited reference was actually last revised in April 2007. From Table 3 in the 2007 document, EPA selected the 90th percentile value as the most appropriate high-end point estimate value to use in the calculation of ecological soil screening level (SSL) values. For the woodcock (the ground insectivore), this value was 16.4% compared with the value of 12% assumed in the SLERA. The assumed food ingestion rate for the Texas indigo snake could not be duplicated. Please evaluate this value and make any dose and hazard quotient revisions that are necessary. [1] U.S. Environmental Protection Agency. 2005. Guidance for Developing Ecological Soil Screening-Levels. OSWER Directive 9285.7-55. November 2003, Revised February 2005.	Soil ingestion rates will be reviewed and revised as necessary.
14	8.	Section 6.3.3, Food Web Ingestion Modeling, Table D-2	The follow listed comments apply to Food Web Ingestion Modeling Section and/or to Table D-2. Please provide access to the Pesticide Science journal article used for some uptake factors for plants and verify these the plant uptake factors.[2] The total PCB soil-to mammal uptake factor of 12.579 from the reference indicated in Table D-2 could not be verified. Please verify this value and provide a brief explanation how the value was derived based on the indicated reference.[3] Regarding the sediment-to-benthic invertebrate uptake factors, values for pesticides and some other organics were reported to be derived from Wong, et al., 2001.[4] Some values displayed in Table 2 were from that paper. For other Table D-2 values, it is unclear, particularly where the value of 3.9 was used for a number of the pesticides. Please clarify how the uptake factors were derived from this paper. Also it appears that the biota-sediment accumulation factor values in the paper are expressed on a wet-weight basis. If this is true, it results in an underestimate of the benthic tissue concentrations as all of the food chain calculations are based on dry weight concentrations. Please evaluate this source and make any corrections to the dose calculations as necessary. Many of the water-to-fish uptake factors were based on a correlation with the octanol-water partition coefficient (log K_{ow}). The model used (i.e. Southworth, et al., 1978[5]) was based on a model for daphnids specific to polycyclic aromatic hydrocarbons (PAHs). Please consider using a model specific to fish (i.e., Bintein, et al., 1993[6]; Veith, et al., 1980[7]; or others) and a larger group of organics. If a K_{ow} correlation approach is used, the uptake factor should be expressed on a dry weight basis to be consistent with the food ingestion rate. Some of the water-to-fish uptake factors were based on values used in the CalEPA Air Toxics Hot Spot Program. The values as cited could be verified, but it was not clear if the bioconcentration factor (BCF) values were presented on a dry-weight or wet-weight basis. Please evaluate this source and make any corrections to the dose calculations as necessary. Additionally, generally looking at the Eisler papers or the ATSDR Toxicological Profiles as the source for a handful of BCFs, it could not be determined if the	Uptake factors will be reviewed and revised as necessary. All uptake factors will be verified to be on a dry weight basis.

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			values were expressed on a dry weight or wet-weight basis and the value could not always be found specified in the referenced document. Please evaluate these sources and make any dose calculations that are warranted (i.e., if the referenced BCFs are wet-weight based). Also please indicate where specifically in the source document that the BCF value is presented. The same comments apply to the water-to-aquatic insect uptake factors. The selected toxicity reference value (TRV) for avian exposure to endosulfan could not be confirmed. Please evaluate the indicated source and make any corrections that are necessary. [2] Briggs, G., R. Bromilow, and A. Evans. 1982. Relationships Between Lipophilicity and Root Uptake and Translocation of Non-Ionized Chemicals by Barley. Pesticide Science. 13: 495-504. [3] Lund, B.O., J. Orberg, A. Bergman, C. Larsson, A. Bergman, B.M. Backlin, H. Hakansson, A. Madej, A. Brouwer, and B. Brunstrom. 1999. Chromic and Reproductive Toxicity of a Mixture of 15 Methylsulfonylpolychlorinated Biphenyls and 3-Methylsulfonyl-2,2-bis-(4-Chlorophenyl)-1,1-Dichloroethene in Mink (*Mustela vison*). Environmental Toxicology and Chemistry 18(2): 292-298. [4] Wong, C.S., P.D. Capel and L.H. Nowell. 2001. National-Scale, Field-Based Evaluation of the Biota-Sediment Accumulation Factor Model. Environ. Sci. Technol. 35: 1709-1715. [5] Southworth, G.R., J.J. Beauchamp and P.K. Schmieder. 1978. Bioaccumulation Potential for Polycyclic Aromatic Hydrocarbons in *Daphnia pulex*. Water Research Vol 12:973-977. log BCF = (0.819 x log K_{ow})-1.146. Adjusted to dry weight assuming 80 % moisture. [6] Bintein, S., J. Devillers, and W. Karcher. 1993. Nonlinear dependence of fish bioconcentration on n-octanol/water partition coefficient. SAR and QSAR in Environmental Research. 1(1): 29-39. [7] Veith, G.D., K.J. Macek, S.R. Petrocelli, and J. Carroll. 1980. An evaluation of using partition coefficients and water solubility to estimate bioconcentration factors for organic chemicals in fish. Aquatic Toxicology, ASTM STP, 707, 116-129.	
15	9.	Section 6-4, Page 6-10	The dose calculations for the mourning dove could not be verified. Please verify the calculations for all exposure areas and make any corrections that are appropriate. The dose calculations for the pocket gopher could not be verified. The discrepancy may be rooted in the calculations for the incidental soil ingestion pathway. Please verify the calculations for all exposure areas and make any corrections that are appropriate.	The dose calculations will be verified and corrected if needed.
16	10.	Section 6.5.4, Page 6-12	The derived values for background numbers should be shown in this report (i.e., Texas-state median background concentrations (30 TAC 350.51(m)). When citing another report please provide more specific information such as section number, table number, or page number. A comparison to values on the RI table 17 does not appear to confirm these statements for all these COPCs. For example max value for selenium in east ditch south soils is 1.43 mg/kg and the maximum background is 0.89 mg/kg.	The background calculations from the RI Report will be added to the SLERA. Section 6.5.3 (East Ditch Riparian Soil Conservative Analysis) states that selenium (1.43 mg/kg) is retained as a soil community COPC. The section does not list selenium as below Site-specific background concentrations. Section 6.5.4 (East Ditch Soil Conservative Analysis) does not list selenium as a soil community COPC because the maximum concentration of 0.757 mg/kg (SLERA Table 21) is less than the Site-specific background concentration of 0.89 mg/kg.
17	11.	Section 6.5.5, Page 6-14	Conservative Analysis (Upper Trophic Level Receptors) raccoon and egret dose calculations could not be verified to the previously discussed questions regarding the benthic invertebrate (and amphibian) uptake factors and the possibility of using a different correlation equation for fish uptake. If any of the relevant uptake factors are revised, please revise the dose and hazard quotient calculations for these	Uptake factors will be revised as appropriate. Table 33 indicates a diet for the egret of 5% water column insects, 20% benthic invertebrates, 70% fish, and 5% amphibians as outlined in the work plan. Appendix D assumes 80% fish and 20%

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			receptors. Conservative Analysis (Upper Trophic Level Receptors) – Table 33 indicates a diet for the egret of 5% water column insects, 20% benthic invertebrates, 70% fish, and 5% amphibians. This conflicts with the actual dose calculations in Appendix D which appear to limit the diet to 20% benthos and 50% fish. Please explain this discrepancy.	benthic invertebrates. This is described in the notes for the East Ditch North Segment Conservative Analysis (page 4 of 5). This is due to using the same uptake factor for insects, fish and amphibians which simplifies the calculations to 80% fish.
18	12.	Section 6.6.1, Page 6-15	The first paragraph describes justification given for eliminating several COPCs based on section 3.13 of TCEQ guidance. This is not sufficient. The TCEQ guidance describes further evaluation of impacts to receptors and critical habitat. A more comprehensive discussion of the disturbed nature of this area could be used to argue that acute exposure is more likely than chronic exposure. Evaluation of the risk from acute exposure along with a comprehensive discussion of the disturbed nature of this area and a convincing argument that the area will remain commercial, industrial could be used to eliminate some of these COPCs. This comment applies to other sections where this justification is used to eliminate COPCs. This includes page 6-16 and 6-17.	Additional text will be added as requested.
19	13.	Section 6.6.2, Page 6-17	The comments at the end of the paragraph on responsibility for selenium contamination are not relevant to the risk assessment. dentifying the source of contamination may be useful in developing remedial actions, if needed, but attributing responsibility is not the purpose of this document. If it can be shown that the source originates off site, or that onsite concentrations are less than background then this can be considered.	Comments will be removed as requested.
20	14.	Section 6.6.3, Page 6-17	East Ditch Riparian Soil (South) - Less-Conservative Analysis – NOAEL hazard quotients (in parentheses) for the Indigo snake for the conservative analysis were greater than 1 for barium (1.7), copper (3.6), lead (3.1), selenium (3.7), and zinc (2.1). With the exception of selenium, please provide an explanation why the snake dose and hazard quotient calculations were not carried forward to this step for these constituents.	Since this is a threatened/endangered species, it would be inappropriate to carry the indigo snake evaluation forward to a less conservative LOAEL HQ analysis. The NOAEL HQ evaluation will be refined using inputs (exposure factors, AUFs) more appropriate for the indigo snake. An evaluation of the quantitative assessment will be presented in the uncertainty section.
21	15.	Section 6.6.4, Page 6-17	Section 6.6.4, Page 6-17, East Ditch Sediment (South) as Soil- Less-Conservative Analysis- Similar to the previous comment, NOAEL hazard quotients (in parentheses) for the Indigo snake for the conservative analysis were greater than 1 for barium (4.6), copper (4.1), lead (9.8), selenium (3.1), zinc (2-4), and 4,4'-DDT (1.3). With the exception of selenium, please provide an explanation why the snake dose and hazard quotient calculations were not carried forward to this step for these constituents.	See response to SLERA Specific Comment 14.
22	16.	Section 6.6.5, Page 6-17 & 18	The justification for using the 0.15 dilution factor with groundwater to surface water concentration is not provided. Please see figure 7-1 of TCEQ RG366 and show all steps used to determine if a dilution factor can be used and how the dilution factor was calculated. Please also determine if there are temporal or seasonal changes in the dilution that should be used.	Two alternatives to justifying the 0.15 dilution factor were evaluated: 1. The groundwater flow (using guidance from TRRP-24) will be coupled with an estimate of the summer stream flow, to show that the groundwater flow is less than 15% of the stream flow. 2. A base flow of 0.1 cubic feet per second (cfs) or estimating flows using the proportional watershed approach (RG-194 Procedures to Implement the Texas Surface Water Quality Standards, Draft 2012). Discharge weighted representative concentrations (see attached Specific Comment 16 Table) were calculated using site-specific hydraulic conductivities, gradient, effective porosity and aquifer saturated thickness. These calculations include a calculation of the Qgw (groundwater flow); the resulting Qgw is 3.68E-04 cfs. If base flow information is not available, TCEQ assumes a value of 0.1 cfs for perennial streams (RG-194). This results in a site-specific dilution factor of 3.67E-03. The calculations and supporting materials will be provided in the revised SLERA.

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23	17.	Section 6.6.5, Page 6-17 & 18	East Ditch Marine (North Segment) - Less-Conservative Analysis (Water Column Receptors) – Table 42 displays the surface water screening results where the maximum detected surface water concentration is compared to the chronic marine water quality criteria, along with a justification for removal of any COPC. Please consider the following comments related to surface water COPCs a. The table indicates that aluminum in surface water is not a COPC because it was detected upstream at high concentrations and it is not bioaccumulative. The maximum surface water concentration in the north ditch was 6.95 mg/L (Appendix B, pdf page 30) rather than the indicated Table 42 value of 2.11 mg/L. This exceeds the upstream (background) maximum concentration of 1.38 mg/L and the screening value of 0.1 mg/L. Additionally, TCEQ calculated a 95% UCL for aluminum in surface water of 2.793 mg/L. Absent more discussion, removal of this metal is not recommended. b. The table indicates that cobalt in surface water is not a COPC because it was detected in Up River Road concentrations. The maximum surface water concentration in the north ditch was 6.62 x 10-3 mg/L. This exceeds the upstream (background) maximum concentration of 2.9 x 10-3 mg/L and the screening value of 1 x 10-3 mg/1. The Up River Road maximum concentration was 1.4 x 10·3 mg/L. Additionally, TCEQ calculated a 95% UCL for cobalt in surface water of 3.07 x 10·3 mg/1. Also, the groundwater maximum concentration (3.7 x 10 2 mg/L) exceeds the groundwater-to-surface water protective concentration level (PCL) of 6.67 x 10·3 mg/L. This is based on the surface water marine criteria divided by 0.15 to account for dilution. Absent more discussion, removal of this metal is not recommended. c. The table indicates that manganese in surface water is not a COPC because the concentration in surface water was similar to groundwater, and it was detected in background and in Up River Road samples. The maximum surface water concentration in the north ditch was 2.7 mg/L. This exceeds the upstream (background) maximum concentration of 0.33 mg/1 and the screening value of 0.1 mg/1. The Up River Road maximum concentration was 1.37 mg/1 and the groundwater maximum was 2.13 mg/1. Additionally, TCEQ calculated a 95% UCL for manganese in surface water of 1.046 mg/1, after removal of the maximum value which appeared to be an outlier. Absent more discussion, TCEQ does not recommend removal of this metal. If manganese is naturally elevated in groundwater, discussion of background groundwater concentrations of manganese would be relevant. Additional discussion related to manganese toxicity would also be relevant (i.e., an expansion of the discussion in Section 7-4.1).	Appendix B (Surface Water Data Summary East Ditch) did not separate the samples from the southern (intermittent, freshwater) and the northern (perennial, marine) portions of the East Ditch. The table will be separated into marine and freshwater data. The 95% UCLs for the East Ditch marine segment will be calculated and added to Table 42. The surface water screening results will be reevaluated and additional justification (lines of evidence) will be added to Table 42 for the removal of any COPC.
24	18.	Section 6.6.5	East Ditch Marine (North Segment) - Less-Conservative Analysis (Benthic Invertebrates) – Table 42 displays the sediment screening results where the maximum detected sediment concentration is compared to the midpoint between the benchmark and the second effects level (i.e., the TCEQ default benthic invertebrate PCL), along with a justification for removal of any COPC. Please consider the following comments related to sediment COPCs: a. The table indicates that barium is not a COPC in sediment. Although sediment concentrations were greater than the upstream background concentration (465 mg/kg), it was also detected in Up River Road samples (834 mg/kg maximum). The maximum sediment concentration in the north ditch was 4,730 mg/kg. TCEQ calculated a 95% UCL for barium in sediment of 2,271 mg/kg. Both values exceed the screening concentration of 547 mg/kg. Absent more discussion, removal of this metal is not recommended. Additionally, the screening value is indicated as a background number. Please describe how this was derived. b. The table indicates that manganese is not a COPC in sediment. Although sediment concentrations were greater than the upstream background concentration (616 mg/kg	The 95% UCLs for the East Ditch marine segment will be calculated and added to Table 42. Barium and manganese will be retained as COPCs and a discussion of the applicability of the screening values to site conditions will be added to Section 7 (Uncertainty Analysis).

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			maximum), it was also detected in Up River Road samples (6,540 mg/kg maximum). The maximum sediment concentration in the north ditch was 2,530 mg/kg. TCEQ calculated a 95% UCL for manganese in sediment of 1,022 mg/kg. Both values exceed the screening concentration of 582 mg/kg. Additionally, the screening value is indicated as a background number. Please describe how this was derived. Absent more discussion, removal of this metal is not recommended.	
25	19.	Section 6.7 Summary, Page 6-17 & 18	There is a statement on page 6-19 that there are no final COPCs for surface water or sediment. See previous comments 17 and 18. Please update as needed. Tracking the opening discussion in Section 6.7, the site is in a developed industrial commercial area, and it is mowed and maintained. Additionally, much of the pit areas are covered by buildings, equipment, or non-vegetative cover such as asphalt or caliche base. This suggests that there is likely no significant ecological habitat present for soil exposure pathways. However, under the TCEQ Ecological Risk Assessment Program, the site itself would pass the soil exposure portion of the Tier 1 Exclusion Criteria Checklist. Soil as a source area for surface water and sediment pathways, should not be excluded. As a Superfund Site, soil exposure pathways should be evaluated as complete and significant. The site condition from the aspect of ecological exposure pathways for soil should be factored into risk management decisions. Although the overall conclusion of Step 3a is that lead in North and South Pit surface soils and selenium in North Pit surface and subsurface soils are present at concentrations that could lead to potential risk for birds and mammals, this discussion generalizes that the hazard quotients are generally low (between 1 and 5) and constitute a low potential risk for these receptors. The discussion theorizes that the source of selenium and lead is potentially related to on-going non-site related anthropogenic activities and historical uses of an industrial and commercial nature, and not to historical Brine Service Company operations. Given the activities and infrastructure on-site combined with routine mowing, it has already been stated that this site would not require an ecological evaluation for soil exposure pathways under the TRRP rule (except as a source medium for surface water and sediment). Please determine if elevated metals in the top two feet of soil require a response action given the site conditions.	See responses to SLERA Specific Comments 17 and 18. A discussion of current and future land use will be added to Section 6.7. Give the current and future Site conditions, a response action for the terrestrial portion of the Site, based on ecological conditions, is not warranted.
26	20.	Section 7.5, Pages 7-17 &18	Many of the justifications listed in the bullet points are not supported by the data or are not relevant to the ecological risk assessment. Attributing responsibility is not the goal of this risk assessment. The goal is to determine risk to ecological receptors.	Text will be rewritten to not attribute responsibility.
27	21.	Section 8.0 & Section 9.0, Page 9-1	This SLERA concludes that additional assessment of ecological exposures of COPCs in sediment, surface water and soil at the site is not warranted. This is conclusion is premature. The conclusions will likely need extensive revision following revisions to the SLERA based on conditions in this letter. The conclusion that there are no impacts to the north section of the east ditch is not supported. All food chain modeling (screening-level trophic analysis (Step 3a)) results that exceed a NOAEL HQ of one need to be evaluated and updated. Please evaluate and update risk to plants and invertebrates from COPCs that exceed screening values.	The conclusions will be revised after the SLERA comments discussed above are addressed.
28	22.	Tables 27 and 28	Please review Tables 27 and 28 for accuracy and completeness. The list of COPCs shown in Table 27 and Table 28 is incomplete. A blank line is present in the COPC column for each table. Please revise accordingly	Tables 27 and 28 will be corrected and updated as appropriate.
29	23.	Table 28	It appears that the Up River Road sediment name is used for East Ditch (north segment). Please be consistent in names used for areas.	The column labeled East Ditch Marine Sediment will be changed to East Ditch North Segment.
30	24.	Tables 35-41	Hazard indexes were not presented for measurement receptors. Please revise.	See response to SLERA General Condition 4.

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31	25.	Table 38	The mercury HQ for the Texas indigo snake is shown as 8.1x10-3, but the text is in bold. Please verify this number.	The typographical error will be corrected.
32	26.	Table 42	The source of the sediment marine PCL value is not clear. Please identify the source for this number and explain how it is used in this comparison.	A footnote will be added.
33	27.	Table 42 notes	A comparison between the max values, background, and screening benchmark shows that many COPCs that are shown in the notes as eliminated still exceed the benchmark and background values. Some other reasons given for elimination of COPCs are not supported. Please revise the notes section and carry the COPCs forward or provide a more detailed justification for elimination. A review of the groundwater COPCs may be needed if the use of a dilution factor is not properly justified. This includes the following: a. Aluminum: The justification for excluding aluminum as a COPC is not adequate. Upstream concentrations are lower than on site concentrations so this is not a valid reason for exclusion. Notes say not a COPC in sediment but table 28 shows as COPC in surface water. b. Arsenic: The notes indicate arsenic is not a COPC in sediment but table 28 shows it as COPC in sediment. Detections and maximum surface water levels are not shown. Maximum measured sediment levels are greater than the screening criteria and background. Please clarify. c. Manganese: Manganese results exceed background and the benchmark value in surface water and sediment. More information is needed on background to show source originates off site. Please clarify. d. Barium: Sediment result exceeds background and the benchmark value. No valid reason is presented to exclude this as a COPC in sediment. Barium is shown as COPC in Table 28. Note says “trophic risk” then says “not a COPC.” Please clarify. e. Cadmium: Sediment result exceeds background and the benchmark value. No valid reason is presented to exclude this as a COPC in sediment. Please clarify. f. Cobalt: Sediment result exceeds screening criteria and offsite concentrations. Cobalt is shown as COPC in sediment and water in Table 28. Please clarify. g. Bis(2-ethylhexyl)phthalate: Sediment result exceeds background and the benchmark value. Notes says “not a COPC in water or sediment” but shown as COPC in Table 28 Please clarify. h. Copper: Sediment result exceeds background and the benchmark value. Please clarify. i. Lead: Note says not a COPC but food chain modeling shows risk. Please clarify. j. Mercury: Sediment result exceeds background and the benchmark value. Please clarify. k. Manganese: Sediment concentration for manganese is higher than background and the screening level. Note says “trophic risk” then says “not a COPC.” Please clarify. More information is needed to show it comes from offsite if this is the case. l. Zinc: Sediment result exceeds background and the benchmark value. Please clarify. m. Alpha-chlordane: In notes section, says there is detection in up river road surface water but in chart says there is not detected (ND). Please clarify.	See responses to SLERA Specific Comments 17, 18 and 19. Corrections will be made as appropriate.
34	28.	Table 42 notes	The number of COPCs in Table 42 is 41, and the number in Table 28 and Table 30 is 50. Chromium, silver, and pentachlorophenol appear to be missing. 1,1-biphenol, 2-nitroaniline, 4-6 dinitro-2-methylphenol, 4-nitrophenol, bis(2-chloroisopropyl)ether, and n-.nitrosodi-n-propylamine are marked as “not a site COPC.” Please include all COPCs in the tables and provide a detailed (not general as in “not a COPC”) justification for elimination.	The COPCs in Tables 27, 28, 29, 30 and 42 will be verified. Tables may be reorganized to provide clarity. Additional commentary will be added as appropriate.

Table 1
Response to EPA Comments on the Draft Screening Level Ecological Risk Assessment (SLERA) Report Dated June 6, 2014
Comments Dated October 14, 2016
Brine Service Company Superfund Site (TX0000605264)
Corpus Christ, Nueces County, Texas

No.	Comment No.	Section	Comment	Response / Notes
35	29.	Table 42 notes	Many COPCs are eliminated based on detection frequency. This is usually permissible if the detections are in less than 5% of samples. If the number of samples is less than 20 (needed to show 1 sample is less than 5%) or if number of detections is greater than 5% elimination may not be permitted.	The purpose of the notes on Table 42 was to summarize multiple lines of evidence for each COPC. A COPC was not removed based on low frequency of detection alone; the low frequency of detection was one of multiple lines of evidence.
36	30.	Table 43	Please clarify why the results in table 43 differ from the results in table 39. Please describe any adjustments made that alter the results.	The text from Section 6.6.5 will be footnoted in Table 43 to explain that the HQ's were adjusted for the area use factor.
37	31.	Table 44	Please clarify why this table is needed. PAH values exceed background but appear to be coming from an offsite source. Please document the source of the PAHs in greater detail. This table is not needed if this can be done.	Table 44 is applicable to the soils discussion in Section 7.3.3. Additional text will be added to the sediment discussion in Section 7.3.3 to discuss offsite sources for the PAHs.
38	32.	Appendix C	Section 2.3 refers to ecotoxicity profiles having been prepared for each final ecological COPC in the SLERA and documented in Appendix C. Appendix C was not made available for review. Please append Appendix C to the SLERA.	Appendix C contained the ecotoxicity profiles for lead and selenium; the two COPCs remaining from the draft SLERA. Appendix C will be updated to include other ecotoxicity profiles based on the results the revision of the document as outlined in the responses to comments above.

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Specific Comment 16 Table

Analyte	Total or Dissolved	Max Detection (mg/L)	Discharge-Weighted Representative Concentration (mg/L)	Surface Water Marine Criteria	Reference	Surface Water Marine Criteria Modified by Default Dilution Factor of 0.15	Surface Water Marine Criteria Modified by Default Dilution Factor of 3.67E-03
Cobalt	T	0.0373	0.0138	0.001	NOAA SQuiRT Australian & New Zealand Chronic	0.0067	0.27
Manganese	D	2.13	1.04	0.1	NOAA SQuiRT British Columbia Chronic Value	0.67	27
Nickel	D	0.0166 J	0.00654	0.0131	TCEQ WQ Standard, WER = 1	0.087	3.6
Selenium	T	0.0126 J	0.00631	0.136	TCEQ WQ Standard	0.91	37
4,4´-DDT	N	2.10E-05	1.49E-05	1.00E-06	TCEQ WQ Standard	6.7E-06	2.7E-04
beta-BHC	N	1.60E-05	NA	2.50E-05	TCEQ WQ Standard for gamma-BHC	1.7E-04	6.8E-03
delta-BHC	N	2.00E-05	NA	2.50E-05	TCEQ WQ Standard for gamma-BHC	1.7E-04	6.8E-03
Endosulfan I	N	6.50E-05	1.89E-05	9.00E-06	TCEQ WQ Standard	6.0E-05	2.5E-03
Endosulfan sulfate	N	2.30E-05	1.56E-05	9.00E-06	TCEQ WQ Standard	6.0E-05	2.5E-03
gamma-Chlordane	N	6.70E-05	2.58E-05	4.00E-06	TCEQ WQ Standard	2.7E-05	1.1E-03
Heptachlor	N	3.10E-05	1.22E-05	4.00E-06	TCEQ WQ Standard	2.7E-05	1.1E-03
Heptachlor epoxide	N	2.90E-05	1.18E-05	3.60E-06	EPA WQ Criteria	2.4E-05	9.3E-04
Total PAHs	N	3.00E-04	NA	3.00E-01	NOAA SQuiRT Acute Value	2.0	82